Tribal Water Resources Program

Introduction

Fifteen years ago the treaty Indian tribes in western Washington partnered with the Environmental Protection Agency (EPA) to create and implement a nationwide model of cooperation and creativity in addressing water quality issues under the Clean Water Act. This year, building on the success of that initiative, these same tribes are embarking on a new partnership with the U.S. Geological Survey to expand the Coordinated Tribal Water Quality Program into a Coordinated Tribal Water Resources Program.

While much has been accomplished in the area of water quality, the Northwest Indian Fisheries Commisson (NWIFC) with its 20 member tribes has identified the need for a comprehensive assessment of water resources in western Washington as the basis for the informed management of those resources. In western Washington, climatic changes and urban development are having profound effects on water resources and aquatic ecosystems. This situation is expected to worsen with an expected doubling of the Puget Sound region's population in the next 20 years.

Judicious management of water resources and protection of tribal rights requires information about the quantity and quality of water available in western Washington.

The assessment would produce scientific information on water resources that could be used to support a variety of tribal water resource management, administrative, and legal activities including:

- Establishing instream flows to sustain viable and harvestable populations of fish;
- Identifying limiting factors for salmon recovery;
- Evaluating amounts of ground and surface water supplies;
- Protecting existing ground and surface water supplies;
- Reviewing and evaluating administrative decisions (for example, proposed water permits and instream flows) and project proposals on- and off-reservation; and
- Participating in federal, state, and local planning processes for water quantity and water quality management (for example, total maximum daily load planning, State of Washington watershed planning under Engrossed Substitute House Bill 2514, and conjunctive use projects).

Proposed Partnership With USGS

The treaty Indian tribes in western Washington requested that the U.S. Geological Survey (USGS) develop a cooperative scientific framework for a comprehensive assessment of water resources in western Washington. The assessment will provide a scientific basis for tribal water resources management by evaluating unimpaired water availability, out-of-stream uses of water by tribal and non-tribal parties, and water requirements for ecosystems in western Washington.

As a federal agency located in the Interior Department, USGS has a trust responsibility to tribal governments. They are also the preeminent authority among governments for instream flows. They can provide valuable expertise, supervision, and guidance to the tribal effort.

Since the 19th century, water resources in western Washington have been the subject of extensive scientific investigation by tribal, federal, state, and local government agencies, public utilities, and private interests. Despite this recent history of investigations, data collected by through these efforts are not readily available to inform current management activities. Many of the investigations were motivated by a specific local concern such as locating a dam to generate hydroelectricity, determining instream flows for a specific reach of a river, or assessing water use for a municipality.

Although some investigations have integrated information about the availability and use of water sources for specific basins or sub-basins, this information has not been compiled on a comprehensive basis for western Washington. A tribal water resources assessment will collect available information on the region's water sources, quality, and uses. Existing or new information systems will be used to make the information readily available to tribal water resources managers.

In addition to providing a comprehensive perspective on water resources in western Washington with existing information, the assessment will identify information gaps and approaches for filling them. The information gaps reflect the large and diverse geography of the region, the various time scales of information ranging from instantaneous flows to decadal climate variability, and the limits on the scientific understanding of river ecosystems and the regional hydrosystems that support them. A primary objective of the assessment will be to identify where additional monitoring, surveys, or focused studies are needed to improve the initial characterization of water resources in western Washington.

The tribes have shown, through their work with EPA in the Coordinated Tribal Water Quality Program, how a strong working relationship can also be developed with USGS. The tribal/EPA effort has improved the structure of relationships, thereby enhancing the success of ecosystem management approaches. Additionally, the tribal/EPA model program has produced transferable tools that can be shared with tribes throughout the nation. These tools include:

- Routine coordination and networking among tribes, state agencies and EPA;
- A coordinated tribal water quality database design and structure;
- A tribal water quality standards template;
- A Coordinated Tribal Water Quality Program design manual; and
- A cooperative state/tribal 303(d) strategy.

Much of this cooperative approach and work can be utilized in the water assessment effort. A unified tribal commitment and call for data will be the foundation of collecting and compiling the most important assessment of this region's water resources ever developed. By embarking on this seven to 10-year effort, tribes and the USGS would initiate a shift in the region's water discussions and policy development from one of speculation and politics to one of substance and purpose. Successful completion could support meaningful dialogue and partnership development throughout the region regarding instream flow setting, water conservation and growth.

Gene Gaddie, Quileute tribal water quality technician, lowers a sechi disc to determine water clarity in the Quillayute River.

The recent release of the State of Our Watersheds Report is just one example of the cooperative efforts and capabilities of the tribes in compiling, analyzing and sharing important natural resource information.

Watershed Report Offers Map For Salmon Recovery

The State Of Our Watersheds Report, produced by the treaty Indian tribes in western Washington in cooperation with the State of Washington, is the most comprehensive report to date on the status of salmon habitat in the region. The report compiles decades of data collected by tribes, and state and federal agencies, painting a picture of watersheds across western Washington.

"Tribes have always lived on watersheds, along the rivers," said Billy Frank Jr., chairman of the Northwest Indian Fisheries Commission. "We have always had a watershed perspective, and this report tells the story of salmon habitat from our perspective."

The State of Our Watersheds report is a product of the Salmon and Steelhead Habitat Inventory and Assessment Program (SSHIAP), a cooperative effort of the treaty Indian tribes in western Washington and the Washington Department of Fish and Wildlife. SSHIAP collects information on salmon habitat conditions throughout the state and manages it in a single geographic information system database.

The report by the salmon co-managers brings together data from across the spectrum – including water quality, available habitat, and salmon run sizes – that have not been displayed together before in one document.

"This report begins to connect the dots between the health of salmon habitat and the health of the salmon," said Frank, adding that the work would not have been possible without the assistance of U.S. Rep. Norm Dicks, (D-Wash.), who was instrumental in securing funding for the project.

"This is a good example of how and where salmon recovery efforts are making a difference and where we need to target more work," said Bob Kelly, natural resources director for the Nooksack Tribe. "The report starts out as a snapshot, but in a few years we'll be able to show a movie."

Upper Quinault River watershed.

The report was released in early 2005. While it took years to compile and write, it represents decades worth of data collected by tribal staff across western Washington. "The tribes' homes are the watersheds," said Frank. "Tribal staff have been out in the watershed for years collecting the data for the report. Since tribes live in the watersheds, we know the watersheds best."

In addition to tribally collected data, the report also collected information from several state and federal agencies. "Bringing together all of that data from different places gives us a much better idea of how salmon are faring in changing habitat conditions," said Mike Grayum, executive director of the Northwest Indian Fisheries Commission, which provides natural resource management support services to 20 treaty Indian tribes in western Washington.

"This report will give us a road map to recovering salmon across the region," said Frank. "With this information, we can make better decisions about were to focus our efforts to bring salmon back to harvestable levels.

New Technology Will Aid Tribal Water Program

Given that two-thirds of the world is water, all life depends on that life-giving fluid. Given that the Tulalip Tribes rely on fish and shellfish for cultural, spiritual and economic purposes, protecting water resources on the reservation is vital to the tribes' way of life.

For most of the last decade, the Tulalip water quality program has worked to preserve and protect the fresh and marine waters of the reservation. Now, new technology is assisting the program in measuring the health of these aquatic systems.

Harvey Eastman, director of the program, is now utilizing a new colormetric spectrophotometer – a machine that is invaluable in helping Eastman and the Tulalip water quality program determine where problem areas exist on the reservation. From there, the Tulalip Natural Resources Department works to address those problems, aiding both the environment and people who rely on that environment.

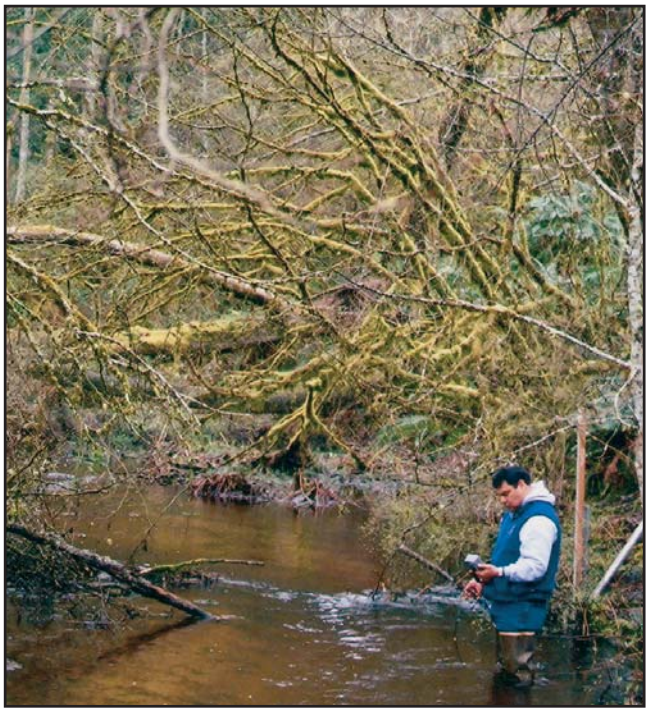
The machine helps measure nutrient content in bodies of water. By detecting nitrate, nitrite, ortho-phosphate and other chemicals, the tribal water quality program can find early indicators of septic tank failure, improper applications of fertilizers, breakdown of animal waste and other events that cause problems for water, people and fish.

Eastman has been working with this upgraded equipment ever since it was acquired in November 2001 through a grant from the Tulalip Tribes.

"This is a valuable tool in assessing our water quality needs on the reservation," said Eastman.

Why the emphasis on finding and preventing septic tank failure? Impurities cause potential for disease-causing pathogens to grow in the water. This could be a problem for shellfish, as well as for any people who come into contact with the affected streams.

"Secondary contact — through swimming, for example — is a big concern for us," said Eastman. "We're very concerned about the health of the people."



Harvey Eastman, director of the Tulalip Tribes' water quality program, gathers water from a stream on the Tulalip Reservation near Marysville.

The Tulalip water quality lab was certified in 1995 by the state of Washington's Department of Ecology. Since then, they've been monitoring surface water on and off the reservation.

The water quality program for Tulalip looks primarily at on-reservation surface water. This includes three streams — Battle Creek, Tulalip Creek, and Quil Ceda Creek – as well as Tulalip Bay and other nearshore marine waters.

Eastman, a Quileute tribal member, started working with the on-reservation water quality program in May 2000. Richard Miller, another staff member, does the off-reservation water quality sampling.

"We work to identify water quality problems so that our natural resources department can solve them," said Eastman. "Clean water benefits everyone in the community."